Lloyds Bank Review

OCTOBER 1960

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CONTENTS

The Bank is not necessarily in agreement with the views expressed in articles appearing in this Review. They are published in order to stimulate free discussion and full inquiry.

Does Money always Depreciate?

By R. G. Lipsey

IT is a commonplace observation that there is a general tendency, observable throughout history, for the level of prices to rise. There have, of course, been periods when prices fell, but it is considered trite to observe that there is a strong trend, one might even call it an historical law, for prices to rise—sometimes slowly and sometimes rapidly, but generally to rise—with the passage of time.

This observation is often made the basis of advice to savers and investors. There are some people, whom I shall call savers, who are mainly concerned to have purchasing power available at some future date, possibly at the time of their old age. There are other people, whom I shall call investors, who look primarily for a good return on their investment but who, if they are prudent, must also be concerned to maintain the real value of their capital in the face of changes in the price level.

The saver will often be advised not to buy ordinary life insurance or annuities, but to place his money in real estate or other commodities whose money value will rise *pari passu* with the general level of prices. In this way, he is told, the real value of his savings will be protected in spite of the historical law of continued inflation. The investor is very often advised to invest in equities and not in bonds, even though the yield on bonds may seem attractive in relation to the yield on equities. It is pointed out to him that both the interest payments and the final redemption value of bonds are fixed in money terms so that, when the loss in real capital value due to inflation is taken into account, the actual yield on his investment may be very much lower than the nominal interest payment. It will be pointed out, for example, that the real rate of return for most war-time investors in government bonds was negative, the average annual rate of change of prices having been greater than the money rate of interest.

Thus, not only have we encountered what seems to be a generally-accepted historical law, but we have found a number of important practical applications which translate the law into

The author is Reader in Economics in the University of London.

advice to savers and investors. It is important to note that these applications of the "historical law of rising prices" to decisions about savings and investment imply some definite time horizon.

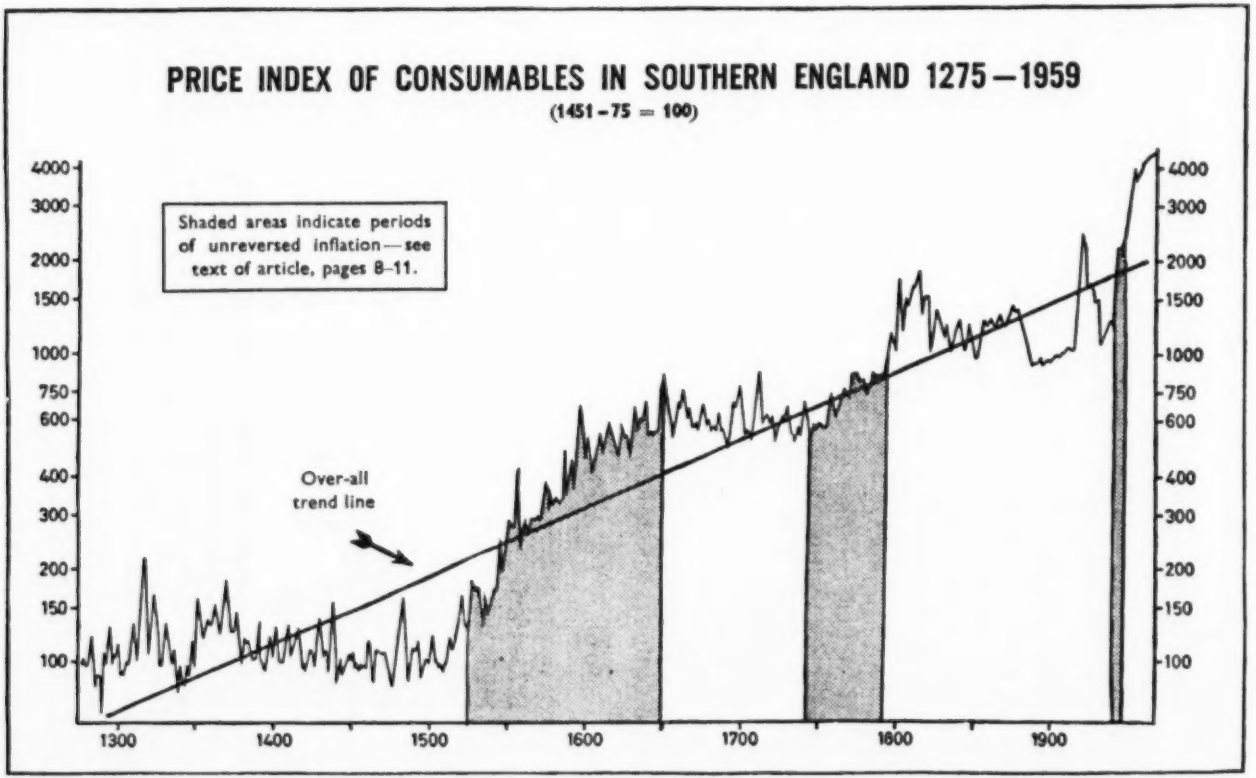
The time horizon of the person buying life insurance or an annuity is unlikely to exceed forty or fifty years. He will want to know something like the following: "What are the chances of my savings being reduced in real value by inflation over, say, the next fifty years?". The investor deciding between bonds and equities will have a time horizon which will vary from two or three to twenty or so years, and ten years may be selected as a representative figure. The investor will be asking himself: "What are the chances of the real value of my capital being reduced by inflation if I accept a promise to repay a stated sum of money, say, ten years hence?". The observation that the British price level in 1960 is very much higher than it was in 1360 may be interesting, but it provides no evidence on which to base answers to these very specific questions. If we wish to consider the historical evidence which relates to these questions, then we need a very detailed picture of the course of prices from year to year.

PRICE MOVEMENTS OVER SEVEN CENTURIES

Economists often complain of the paucity of data in their subject compared to that available in, say, astronomy, where observations have been carefully collected over many thousands of years. This complaint is often justified. For many economic time series there are no figures before the second world war; other series extend back to the 1930's or 1920's, while in a few cases it is possible, by means of a major effort of estimation and "guestimation", to extend a series back for, say, one hundred years. In the case of British prices, however, the situation does not conform with this generally gloomy picture. A few years ago, Professor Phelps Brown and Miss Sheila Hopkins published an index of prices in Britain which extends back to 1264.[1]

This remarkable index provides a reasonably accurate indication of variations over the last seven centuries in the cost of purchasing a constant bundle of goods. The main components of the bundle are: farinaceous products, meat and fish products, butter and cheese, drink, fuel and light, and textiles. It will be seen that the index by no means includes all those commodities whose price variations would be of interest to investors. Variations in the index over periods of ten and fifty years should, however, give a reasonable general indication of

[1] "Seven Centuries of the Prices of Consumables, compared with Builders' Wage-rates", E. H. Phelps Brown and Sheila V. Hopkins, *Economica*, Vol. XXIII, No. 92.


PRICE INDEX OF CONSUMABLES IN SOUTHERN ENGLAND 1275—1959
(1451-75 = 100)
Shaded areas indicate periods of unreversed inflation—see text of article, pages 8–11.
Over-all trend line
4000
3000
2000
1500
1000
750
600
400
300
200
150
100
1300
1400
1500
1600
1700
1800
1900

changes in the purchasing power of the saver's and investor's pounds.

The Phelps Brown-Sheila Hopkins series is presented from 1275 (on a logarithmic scale) in the chart on page 3. It is obvious that any straight-line trend drawn through the series would be upward-sloping, indicating that the trend of British prices is rising through time. The line actually drawn on the chart is a linear trend line fitted to the data by least squares, which is the method most commonly used in elementary statistical analysis.[1] This line indicates that the average trend in British prices over the seven centuries in question has been an increase of one-half of one per cent. per annum. This rising trend is undoubtedly the basis for the postulated historical law of rising prices.

If we look carefully at the actual price series in the chart, however, we see that there are very many periods in history in which the price level movements *do not* follow the trend line. There are periods in which the price level fell, and there are other long periods in which there is no discernible upward or downward trend in the level of prices. The percentage changes between the main peaks and troughs of the price level over these seven centuries are as follows:—

Period	Number of Years	Percentage change in Price Level
		%
1275–1525	250	+ 29
1525–1650	125	+550
1650–1744	94	— 38
1744–1813	69	+263
1813–1893	80	— 51
1893–1920	27	+183
1920–1932	12	— 59
1932–1959	27	+322

If we compare the value of the price index in each year with its value in the preceding year, we find that there were 343 years in which the price level rose from one year to the next, and 328 years in which the price level fell, while in the remaining instances the price level held constant. The short-run variability

[1] The equation of the line is log P = 1·8032 + ·0022N, where P is the price index and N the year, with 1275 = year 1. The graph is plotted on a logarithmic scale where *equal vertical distances* indicate *equal percentage changes* in the price level. The index runs to 1954 and, in order to bring the data up to date, the retail price index was used to extend it to 1959. For a very few years in the sixteenth century the index is not available, so that a price level comparison cannot be made for these years.

of the price index is shown by the following facts: the longest period of *uninterrupted* price rise was the thirteen years from 1940 to 1952; the next longest period was the seven years from 1912 to 1918, while there were only three periods of six successive years of price rises—1478–83, 1762–67, and 1835–40. The longest periods of successive price decreases were the three five-year periods 1473–77, 1651–55 and 1826–30.

It is apparent that the price level fell from one year to the next almost exactly as many times as it rose, although it may be argued that *annual variations* in an index so heavily weighted with agricultural commodities are not of very great interest. The above facts do suggest, however, that before we jump from the observation of the rising trend over the period as a whole to the giving of practical advice to savers and investors, it is necessary to make a detailed examination of the price level movements.

HOW PRICES HAVE CHANGED

Let us start at the year 1275 and find out whether the price level was higher or lower *ten years* from that date, that is, in 1285. We then repeat this procedure every year from 1275 until 1949, noting each time whether the price level was higher or lower ten years after the date in question. We may then repeat the whole procedure, only this time using a time horizon of *fifty years*. Starting at 1275, we consider the price level fifty years from that date; we repeat the procedure for every year until 1909, relating the price level in that year to the price level in 1959.

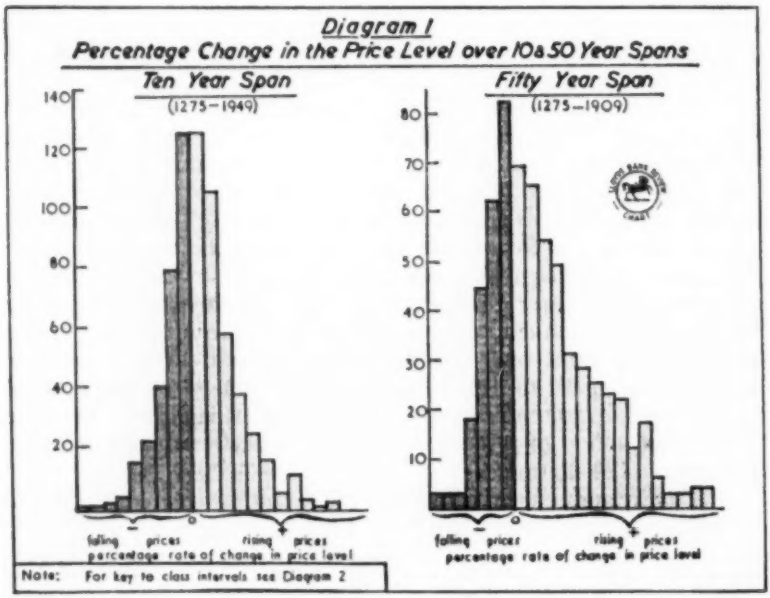
The diagrams on page 6 summarize the result of these experiments. They show, for example, that when the time span is fifty years the most frequent outcome is for the price level to *fall* by an amount between zero and 9 per cent. There were eighty-two instances in which the price level fell by an amount between zero and 9 per cent. over the interval of half a century. The next most frequent result is for the price level to *rise* by an amount not greater than 10 per cent. There were sixty-nine instances in which the price level rose by an amount not greater than 10 per cent. over a half-century period. When the time span is changed to ten years, the frequency of price level increases of up to ten per cent. (125 instances) is almost the same as the frequency of price level decreases between zero and nine per cent. (124 instances).[1]

The frequency distribution for the change in the price level

[1] The class intervals for Diagrams 1 and 2 are such that the upper limit of each class is 10 per cent. larger than the lower limit. The upper limit is included in each class. This means that the very few cases in which prices 10 or 50 years hence were unchanged have been included in the class —9 per cent. to 0.

over a fifty-year time horizon does show a definite bias towards inflation. There are 635 years between 1275 and 1909, and a guess that the price level would be higher fifty years from the date in question would have been correct in 66 per cent. of these years and wrong in only 34 per cent. At any time during these seven centuries, in other words, a guess that the purchasing power of money would on balance decline during the ensuing fifty years was twice as likely to be correct as a guess that prices would fall or at best remain stable. Nevertheless, it is hardly a great triumph for the supposed law of historical depreciation of money that in one out of every three instances the implied assumption that prices would rise over the following half-century turns out to be quite wrong. When, moreover, we adopt a time horizon of only ten years, the tendency towards inflation becomes much less marked than it is over a fifty-year horizon. For the years between 1275 and 1949, a guess that the price level would be higher ten years after the date in question would have been right 57 per cent. of the time and wrong a full 43 per cent.

As far as the general evidence of history goes, therefore, the odds are somewhat in favour of the bet that, starting from any year over the last seven hundred years, the price level could be expected to increase over a period of ten years. But the odds



are not overwhelming, and in 43 out of every 100 cases it would eventually turn out that prices had fallen instead of rising.

A casual glance at the chart (page 3) shows that the periods of price increase are not spread evenly throughout the seven hundred years. More light may be shed on the evidence of history if we consider the price movements in each century. The following table shows the results of a guess taken every year of each century as to the change in the price level over periods of ten and fifty years. The details for the ten-year time horizon are shown in Diagram 2 on page 9.

A guess taken in each of these years that the price level would be higher:	fifty years from each date in question	ten years from each date in question
	Percentage of Correct Guesses	
	%	%
1275–1299	60	36
1300–1399	43	48
1400–1499	60	48
1500–1599	99	81
1600–1699	57	47
1700–1799	91	75
1800–1899	45	46
1900–1909	100	80
1900–1949	—	68

It will be seen from this table that in most centuries it was a fairly good bet that the price level would rise over a period of fifty years. There are only two centuries, the fourteenth and the nineteenth, in which the odds favour a fall in the price level when the time horizon is fifty years. If, in every year from 1800 to 1899 one had taken a bet that the price level fifty years hence would be higher than it was in the year in question, one would have been wrong 55 per cent. of the time. On balance, however, the evidence of history is fairly strongly in favour of inflation if one's time horizon is fifty years, although there are some quite long periods which provide exceptions to this rule. Thus, the peak level of 216 in the year 1316 was not again exceeded until 1546—as much as 230 years later. The peak level of 1650 was not surpassed for 61 years, nor that of 1711 for 82 years. It was more than a century before prices again reached the levels seen during the Napoleonic wars.

If we now consider a time-span of ten years, the picture is markedly different. If we took a bet in each year that the price level would be higher ten years from the date in question, we would be wrong more times than we would be right in the

thirteenth, fourteenth, fifteenth, seventeenth and nineteenth centuries. How is it, then, that even with a ten-year time horizon the odds do nevertheless slightly favour inflation over the whole period? It is for the reason that in two centuries, the sixteenth and the eighteenth, the odds are very heavily weighted in favour of inflation; in all the other centuries the odds were in favour of deflation, but with a much smaller margin. Clearly, the *evidence of history* does not support the person who argues as follows: "Favourable inducements to invest in bonds (with, say, a ten-year maturity date) should be discounted severely, because bonds do not provide a necessary hedge against the almost inevitable inflation". In most of the centuries between 1275 and the present time a person following this advice would have been wrong more times than he would have been right.

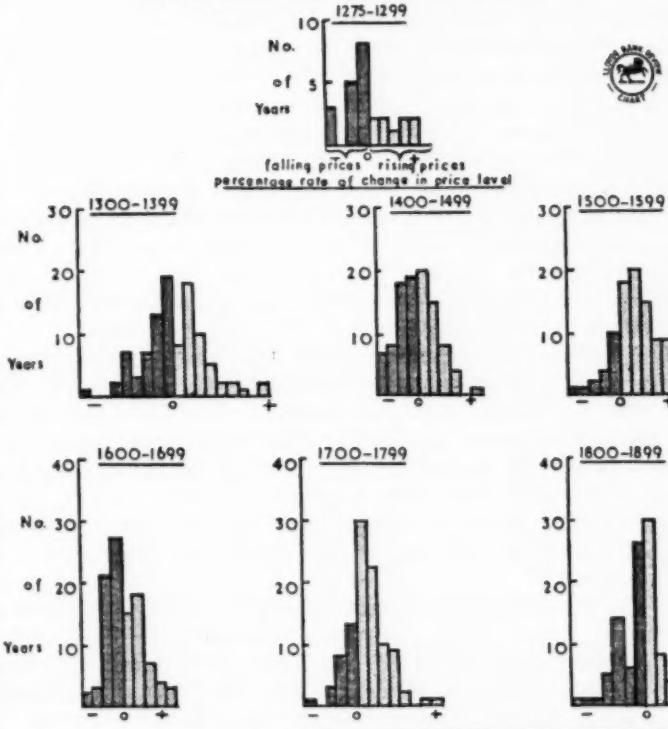
FIVE MAJOR INFLATIONS

We must now take a closer look at the chart and ask ourselves: what is the basis for the widespread belief in the historical law of rising prices? The first thing we notice is that there have been five major inflations in the seven centuries under consideration. The inflations which caused *permanent* increases in the price level have been concentrated into only three historical periods, while there have been two additional periods in which a serious inflation was followed by an almost equally serious deflation.

The first inflation covers a period of approximately 125 years from about 1525 to, say, 1650. The causes of this price rise are by no means crystal clear. The inflation of the later part of the period is probably accounted for by the influx of Spanish gold and silver from the New World. This influx increased steadily throughout the sixteenth century, reaching a maximum in 1600. It was one of the main causes of this, the longest sustained inflation in recorded British history. The total quantities of treasure which Earl Hamilton has shown to have arrived in Europe in the *first half* of this century do not, however, seem to have been sufficient to account for the price increases of that period. It appears most likely that the inflation in the early part of the period was purely domestic in origin. The cause may well have been a debasement of the coinage by the Tudor monarchs who, for the first time in British history, provided a central government of sufficient authority to create legal tender by their own fiat.

After the specie flow dried up early in the seventeenth century, the price level showed no discernible trend for the next one hundred years. The last half of the eighteenth century—

Diagram 2
Percentage Change in the Price Level over 10 Year Span
Details for Each Century 1275-1949



Class	Falling Prices % Change		Class	Rising Prices % Change	
1	— 0	— 9·0	1	+ ·1	+ 10·0
2	— 9·1	—17·3	2	+ 10·1	+ 21·0
3	—17·4	—24·8	3	+ 21·1	+ 33·1
4	—24·9	—31·6	4	+ 33·2	+ 46·4
5	—31·7	—37·8	5	+ 46·5	+ 61·0
6	—37·9	—43·4	6	+ 61·1	+ 77·1
7	—43·5	—48·5	7	+ 77·2	+ 94·8
8	—48·6	—53·2	8	+ 94·9	+114·3
9	—53·3	—57·4	9	+114·4	+135·7
			10	+135·8	+159·3
			11	+159·4	+185·3
			12	+185·4	+213·9
			13	+214·0	+245·3
			14	+245·4	+279·9
			15	+280·0	+318·0
			16	+318·1	+359·8

from 1744 until the Napoleonic wars—was the second great period of prolonged inflation. There is no general agreement on the reasons for this inflation, but the most likely cause is a large expansion in the money supply caused by the rapid growth in the number of banks, particularly country banks, during this period.

The third period of inflation is that associated with the Napoleonic wars. The price level rose rapidly from 1793, and the pace of inflation quickened after suspension of specie payments by the Bank of England in 1797. The price level reached its peak in 1813, and from that time on prices fell rapidly. From 1825 to 1870 prices fluctuated considerably, averaging out at about the 1795–6 level. After 1874 the price level fell sharply, but even at the low point touched in 1893 it was still slightly above the 1793 figure. Thus the peace-time inflation of the last half of the eighteenth century was a permanent one whose effects were never reversed, whereas the war-time inflation associated with the Napoleonic wars was a temporary inflation whose effects were subsequently completely reversed.

The last two periods of inflation are those associated with the two world wars of the twentieth century. During the first world war the price level rose sharply, but fell again quite drastically throughout the 1920's. The price level again rose severely during the second world war but, *unlike the experience of the first war, this price level movement was not even temporarily reversed, so that a permanently higher level of prices was established.*

This brief inspection of the historical data suggests several conclusions:

(1) There have been a number of major inflationary periods in the last seven centuries. There have been three periods, 1525–1650 (debasement of the coinage plus Spanish gold and silver), 1750–1790 (rise of banking?) and 1939–1946 (second world war) which witnessed a *permanent* upward shift in the price level. The inflations in the other two periods—1790–1813 (Napoleonic wars), and 1914–20 (first world war)—were followed by deflations of more or less equal severity, so that there was not a major permanent upward shift in the level of prices.

(2) There have been few periods of long-sustained deflations comparable in size and magnitude to the major inflationary periods. Omitting the deflations which merely reversed the price increases of the Napoleonic and the first world wars, the only major long-run deflation is the one found in the nineteenth century.

(3) There are several long periods in history during which the trend of prices was neither inflationary nor deflation-

ary, so that the price level was approximately stable.

(4) All long-run price trends, rising, falling or stable, are interrupted by short-run price fluctuations associated with such phenomena as cyclical variations in the level of business activity, good and bad harvests, changes in the terms of trade, and many other "random shocks". These short-run variations are large and frequent enough to cause a bet on changes in the price level over so short a period as, say, ten years to be a most hazardous affair. In general, the shorter the period over which the price level variation is being considered, the more hazardous is the bet. A fifty-year period gives some margin in favour of inflation, a ten-year period gives very little, and a one-year period gives almost none.

(5) The three major inflations of British history have all been associated with large changes in the quantity of money: gold and silver associated with the discovery of America, credit money associated with the development of banking, and the monetary expansion associated with the deficit financing of the second world war. It is important to note, however, that, as it stands, this observation does not provide serious evidence in favour of the quantity theory of money. In order to provide any sort of serious test of the quantity theory, it would be necessary to show that the quantity of money did *not* increase substantially during the periods in which the price level did *not* rise, as well as to show that the quantity of money *did* increase during periods when the price level *did* rise.

The person who, starting from 1275 and moving year by year to 1949, bets on a rise in the price level is really betting that his time period will extend into one of these major periods of economic upheaval. The importance of this point can be shown if we merely remove the three historical periods of prolonged permanent inflation. We again tell our imaginary investor to make guesses about the change in the price level ten years from the date in question every year from 1275 onwards, only we now give him the added information that his guesses will not involve any of the great inflationary years, 1525–1650, 1744–92 and 1939–46.[1] If our investor still insists on betting on a rise in prices, he will in fact be wrong more times than he will be right. The odds against his being right are 52 to 48.

[1] In other words, he starts at 1275 and guesses the price level in 1285, and runs to 1514, guessing the change from that year to 1524. He starts again in 1651, running to 1733 (relating 1733 to 1743). He starts again in 1793 and runs to 1928 (relating 1928 to 1938). He starts again at 1947 and goes to 1949 (relating the price level in 1949 to that in 1959).

Thus we see how much the investor who uses historical precedent as a basis for an assumed bias towards inflation is relying on the occurrence of one of the major economic upheavals over the period of his investment. On the complete evidence of history there is a slight margin of the odds in favour of inflation, but it is hardly sufficient to justify ignoring any important differential inducement to invest in bonds rather than equities. On the other hand, if the investor has reason to believe that the period of his investment will *not* extend into a major economic upheaval, then, *if he wishes to proceed on historical evidence*, he should place the odds very slightly in favour of *deflation* rather than inflation.

IS INFLATION MORE LIKELY NOW?

Of course, the investor may still argue that, in the world as it has been since the second world war, there is a definite presumption in favour of inflation; but this view has to be based on totally different arguments from those of historical precedent. The case for such a view usually proceeds in two steps, the first arguing that inflation is now more easily achieved, and the second that the motivation to cause inflation is now much stronger than in the past.

The first step merely refers to the general abandonment of convertibility of currencies into precious metals and the consequent adoption of fiat currencies: "Never before has it been so easy to expand the money supply; today new currency can be created merely by the operation of the printing presses". This step is permissive; it argues that inflations are more easily brought about than in the past. The second step provides the central authority with the motive for availing itself of this possibility. The motive is generally provided by full-employment policy. If the State accepts the obligation of maintaining full employment, then periodic bouts of deficit financing may be necessary to prevent major slumps. These will cause a secular expansion in the (easily increased) money supply which will be accompanied by a secular upward drift in the price level.

An alternative second step to the argument merely states that periods of full employment are, and always have been, inflationary, and that steady average price levels in the past have been achieved by alternating periods of full employment with periods of heavy unemployment. If the State now succeeds in removing the periods of heavy unemployment, this will give the trend of prices an upward tilt through the operation of natural market forces, even though a balanced budget is achieved.

This is not the place to attempt to assess these arguments. We merely note that the first step depends on the belief that the expansion of bank credit will prove to be very much easier than was debasement of the metallic coinage in the past. The second step in the argument depends on the belief that governments will in the future be more inclined to resort to inflation to achieve their objective of full employment than they were inclined to resort to debasement in the past to achieve other objectives such as the successful prosecution of wars. This may well be so; but when so stated, the arguments do not seem to be of the sort which all reasonable men are bound to accept as conclusive without the need of further discussion and the presentation of further evidence.

The argument just considered runs as follows: "The major inflations of history are all associated with major changes in the quantity of money. In the future one can expect an increase in both the frequency and the magnitude of such inflation-inducing changes in the money supply. Therefore, inflation will be a much more common phenomenon in the future than it has been in the past. Price rises will in fact be so frequent that, *unlike the past*, a bet on a rise in the price level over a time-span of ten years will be a likely winner". The argument thus amounts to saying that, because the future will be so very unlike the past, past experience of price level variations can safely be ignored. On the other hand, the argument based on the "historical law of rising prices" amounts to saying that prices have risen in the past and, becasue future price level experience *will be similar to that of the past*, inflation can be expected in the future. (I hasten to add that I am in general agreement with Professor Popper's criticisms of such historical laws based on pure extrapolation.) Whatever one feels about the strengths of the two types of argument just outlined, it is apparent that one cannot have it both ways. Clearly the two positions cannot be held simultaneously, for they contradict each other.

If investors are advised to expect continued inflation on the basis of the new arguments, they are being told that the future experience of changes in the money supply will be *very different* from what it was in the past. If, on the other hand, the advice is based on historical precedent, so that the investor is to expect inflation in the future *because* this has been the experience of the past, then the advice rests on a very shaky basis indeed. The evidence of simple historical precedent is at best inconclusive.

London School of Economics. R. G. Lipsey.
July, 1960.

The Finance of Electricity Supply

By Ronald S. Edwards

THE finance of the public sector of British industry is quite properly a matter of general concern. Its pricing policies affect practically every citizen. Its capital investments are a significant part of the total for the whole of industry.

The Electricity Boards in England and Wales—with which this essay is concerned—command net assets of a written-down value of £2,000 millions. They invest in plant and other fixed assets some £300 millions a year, receive in electricity revenue well over £500 millions a year, and run retail trading businesses with an aggregate turnover of £70 millions a year. Figures of this order raise questions of the first magnitude. Do the prices charged for electricity cover the full costs? Is a sufficiently large proportion of the required capital secured by "self-financing"? Are the budgets, both short and long, competently prepared and adequately scrutinized? Can electricity investment be adjusted upwards and downwards in a counter-cyclical manner? Is the problem of the peak load being vigorously tackled?

The recent publication of the annual reports of the Electricity Boards and the Electricity Council makes this a suitable occasion to consider briefly some of the issues raised by these questions. On two important matters I shall have nothing to say. On the financial aspects of nuclear energy I could add nothing to the paper given by Sir Christopher Hinton, Mr. Brown and Mr. Rotherham at the Madrid meeting of the World Power Conference[1] and the recent government White Paper.[2] On whether nationalized industries should be allowed or required to go to the capital market I could say little that would not be highly speculative, since the question is so closely bound up with wide issues of economic and fiscal policy.

Mr. Edwards is a Deputy Chairman of the Electricity Council. Trained as a professional accountant and later as an economist, he became Professor of Economics with special reference to Industrial Organization in the University of London. He has been Independent Chairman of the British Watch Manufacturers Association, a member of the Council for Scientific and Industrial Research, a member of the Herbert Committee on the Electricity Supply Industry, and is at present a member of the University Grants Committee.

[1] Hinton, Brown & Rotherham: *The Economics of Nuclear Power in Great Britain.*

[2] The Nuclear Power Programme (Cmd. 1083, June, 1960).

The opinions expressed here are personal and are not necessarily shared by all my colleagues on the Electricity Council.

REVENUE AND COSTS

The Electricity Boards are *each* required by statute to ensure that their revenues are not less than sufficient, taking one year with another, to meet outgoings properly chargeable to revenue. The statute refers to "proper" provision for the depreciation or renewal of assets, "proper" provision for the redemption of capital and "proper" allocations to reserve funds which each Board is bound by statute to set up.

In practice, the Boards have interpreted their statutory obligations concerning accounting in a normal commercial manner. Thus they provide fully for depreciation and deem this, so far as charges to revenue are concerned, to cover proper provision for capital redemption. If Boards provided for capital redemption in excess of depreciation, consumers would be paying not only for the assets they used up but would in effect be buying out the stockholders and the Treasury. The Boards make allocations respectively to Generating and to Area Reserve Funds, but in the consolidated statement of accounts these are shown as an appropriation of surplus—again in line with normal practice in industry.

Depreciation

Since the war many, perhaps most, businesses have followed the practice of providing above the line for depreciation on an historical cost basis, while setting aside part of the profit to meet the difference between this provision and the likely cost of replacement at post-inflation prices. A few bold spirits have engaged in major revaluations.

The electricity supply industry follows the historical cost basis, some of the Boards making supplementary "below-the-line" reserves. Does this mean that current electricity costs fail to cover real capital consumption in current value terms? The question is of great importance in so capital-intensive an industry. I believe the answer to the question is "no": real costs are fully covered.

In the first place the book lives used by the Boards are, on the basis of experience, conservatively short. Where technological advance suggests that lives should be reduced or depreciation be accelerated this is done. In 1958/59 the Generating

Board shortened the book lives of important classes of assets and thus added nearly £6 millions to the depreciation bill for that year. In 1959/60 the Board extended to power stations the practice, already followed for other assets, of computing depreciation from the beginning of the construction period rather than from the date of commissioning. This, together with small changes made by certain of the Area Boards, added a further £6 millions to the depreciation provision.

Not only are the lives of the assets conservatively assessed, but it is the general practice in the industry to write off, on the straight-line basis, the whole of the original cost. There is, however, commonly some scrap or residual value when assets actually reach the end of their lives and, moreover, consumers make in some cases contributions to capital expenditure which reduce the net cost to the Boards. Thus, in judging the adequacy of the aggregate depreciation provisions of £82 millions in 1958/59 and £95 millions in 1959/60, account must be taken of the fact that in these two years the industry received £7 millions and £9 millions from the two sources just mentioned.

The third, and most important, factor concerns the replacement cost of assets. The cost per unit of capacity that the industry needs to create in order to make good the "consumption" of its assets has not been rising proportionately to the general price level. For important classes of equipment, it has actually been falling. This for two reasons: the integration and growth of the supply system enables units of small capacity to be replaced by larger units which secure greater economies of scale; and the advance of manufacturing technology reduces the cost of plant of a given capacity. The Central Electricity Generating Board have made calculations to show that, for example, the capital cost per kilowatt of a generating unit decreases exponentially with the increase in capacity, giving a reduction of 20 per cent. in cost per kilowatt for a 100 per cent. increase in capacity. Further, given price stability, improvements in manufacturing technology can be expected to result in real costs reducing exponentially at the rate of 2½ per cent. per annum.[1] The effect of these and other factors is shown in the dramatic fall in the cost of conventional generating plant: 30 MW sets have resulted in capital cost for a complete station of £67 per kw, whereas a 550 MW set to be commissioned in 1963 will, at tender prices, result in capital cost of a complete station of £39 per kw.

[1] See Hinton, Brown & Rotherham: *op. cit.* page 3.

The allowances to be made for these various factors are matters of judgement. It is more realistic to think of a range of acceptable figures for depreciation, rather than of one figure that is right, all others being wrong. At the lower end the figure would be scarcely adequate and at the upper end unreasonably high. Although they must be kept regularly under review, the total annual provisions now being made are at present comfortably inside these limits.

Interest on Borrowing

At present the Electricity Council undertakes all borrowing, both long and short, on behalf of the industry in England and Wales. The long-term debt of the Electricity Council is about £1,800 millions, of which nearly £1,200 millions is for stock issues guaranteed by the Treasury, and nearly £600 millions for advances made by the Minister of Power (Exchequer Advances). Since the Chancellor in 1956 decided to make the Treasury directly responsible for the supply of capital to all the nationalized industries, these advances, which are repayable by by equal annual instalments over 25 years, have become the sole source of long-term finance. Bank advances (at present limited to £55 millions) are the only other important source of borrowing.

Interest is a very large item of cost: £60 millions in 1958/9 and £68 millions in 1959/60. The bill is rising because (a) net indebtedness is increasing and (b) the rate of interest is rising. While the average rate of interest payable on all outstanding borrowings in 1959/60 was $4\frac{1}{4}$ per cent., the current rate on Exchequer Advances is $6\frac{1}{4}$ per cent. It is worth mentioning that all interest is charged straight to revenue, despite the fact that some of it is attributable to borrowings which finance power stations and other works during the period of construction.

As Exchequer Advances come from the government, and part of the government's below-the-line expenditure is financed from the budget surplus, the electricity industry is sometimes loosely accused of being subsidized from public funds. More sophisticated criticism is directed to the fact that the rate of interest paid by the industry would be higher but for (a) the compulsory saving which is imposed by the government through the budget surplus, and (b) the passing on of government credit terms in the rates of interest charged by the Treasury to the industry.

Certainly, the finance of below-the-line government expenditure from taxation eases the burden on the capital market; if there were no compulsory saving, the capital market would be a much tougher place for borrowers. This, however, would affect not only the electricity industry, nor only the public sector as a whole; it would affect all borrowers and, for that matter, the whole economy through a smaller supply of capital and higher interest rates.

If there were no budget surplus or if the surplus were used for debt repayment, and the electricity industry was told to fend for itself and given freedom to choose how best to do this, it could make a good showing on the capital market. If, however, it were restricted to normal forms of fixed interest borrowing, the industry, with others similarly placed, would suffer from the effect of the present dislike by investors of stocks which provide nothing for growth or as a hedge against inflation. Even so, the credit-worthiness of so strong a borrower would not be much below that of the government itself. This is not to be taken as advocating any major change in the present method of financing—which I have already said will not be discussed—but merely to deal with the criticism referred to earlier. Since the industry fully covers its costs and makes a surplus it is scarcely reasonable to accuse it of being subsidized. In the financial framework within which it is asked to live it pays its way. It could do so in any other.

The Surplus

After providing realistically for depreciation and meeting interest charges, the industry's aggregate surplus in 1959/60 was £27 millions, nearly 1·5 per cent. of net assets. The surplus earned by each Board is automatically ploughed back into the business of that Board.

How large should the surplus be? The statutes give little guide to the industry in this matter. The Boards have a duty to develop and maintain efficient, co-ordinated and *economical* systems. They must "have regard to" the desirability of preserving natural beauty. They must "secure so far as practicable" the development, extension to rural areas and cheapening of supplies. Having decided how best these and other duties can be reconciled, each Board must then bear in mind the injunctions to make proper allocations to a Reserve Fund and to ensure that revenue, taking one year with another, is "not less than" costs.

THE PROBLEM OF SELF-FINANCING

The Herbert Committee considered that the industry should carry sufficient reserves to cushion it against short-run changes in demand and costs, and to avoid the need for violent or frequent alteration of tariffs. It suggested that the industry should aim to earn (after providing for full depreciation and interest) say 1 per cent. on the capital employed. It did not, for reasons which were explained at length, believe that present consumers should "subsidize" the capital requirements of future consumers. Sir Roy Harrod, on the other hand, has expressed the view ". . . . that the nationalised industries be told that in future they will have to find all their capital requirements by internal finance. . . . .".[1] For electricity supply, doubling in size every decade, to generate the whole of its capital requirements through prices would mean that revenues from consumers would have to be increased by more than 25 per cent. How much more would depend on consequential tax liabilities and on the elasticity of demand for electricity. The Radcliffe Committee came to the conclusion that it would not be realistic to look for a solution of the problem of capital supply along these lines. The Committee thought that, in the case of electricity, opportunity might be taken to find some additional capital by refraining from price reduction as costs fall. "But we are aware that, when it comes to hard figures, opportunities of this kind are likely to be small in relation to the total new capital needed by these industries."[2]

He would be a bold man who would argue that in this matter there is one clear principle that ought to override all other considerations; he would be equally bold to argue that the conflicting considerations, when weighed, would lead to only one defensible decision so far as the earning and retention of surplus revenue is concerned.

The Long-Term Investment Programme

Soon after its formation the Electricity Council had to face as a practical and urgent issue the problem that the industry was coming to the end of its statutory borrowing powers and had, through the Minister, to ask Parliament to increase them. Estimates were prepared for the seven years to March, 1965, showing that the industry would need to incur £2,130 millions of capital expenditure (gross). In considering what proportion

[1] *Policy Against Inflation*, Macmillan 1958, p. 238.

[2] Report of the Committee on the Working of the Monetary System, p. 219, para. 592.

of this should be financed from internal resources the Council recognized, on the one hand, the duty of the Boards to do justice as between present and future consumers and, on the other, the burden which would be imposed on the supply of capital. It felt that there should be no major change in policy and in particular no change which would jeopardize the industry's competitive position against the other publicly-owned fuel industries. But it hoped, subject to these conditions, to finance more of its capital requirements from internal resources than hitherto.

Power for the Future (published by the Council in December 1958 in support of the industry's application for increased borrowing powers) stated that the industry expected to finance from internal resources 48 per cent. of the industry's gross capital requirements during the seven years to 31st March 1965, as compared with 42 per cent. over the previous decade. This meant that £1,030 millions would have to come from consumers for depreciation and surplus and by way of capital contributions.

The capital programmes were fully discussed with the Ministry of Power and debated in Parliament. Mr. Maudling's summing up on self-financing was as follows: "This is a matter on which it is impossible to be dogmatic. All one can do is to put the principles on which the industry is working and suggest that in the view of the Government, by and large, those are sound principles."[1]

The Electricity (Borrowing Powers) Act, 1959, raised the industry's borrowing limit (for sums borrowed up to 31st March 1965) to £1,800 millions or such greater sum, not exceeding £2,300 millions, as the Minister of Power may by Order specify. Any such Order would require approval by resolution of the House of Commons. It is estimated that the lower limit will be reached early in 1962. The pattern of the first two years has been as follows:—

	1958/9	1959/60
	£m.	£m.
Capital requirements	250	305
Depreciation etc.	91	106
	159	199
Surplus	27	27
Net borrowing	132	172

[1] *Hansard*, 20th January, 1959, Col. 55.

The percentage of capital requirements financed from internal resources was 47·4 in 1958/9 and 43·6 in 1959/60. There was nothing untoward in this reduction. Given large year to year variations in capital expenditure there are bound to be material differences in the self-financing ratio, since it would be wrong to attempt to vary tariffs on a short-period basis to maintain a stable self-financing ratio. The industry's expectations in this matter are based on the longer term. The combined figures for depreciation and surplus for the two years are broadly in line with expectations. As the business of the Boards expands, there will need to be reasonable increases in surpluses.

The Growth of Efficiency

The consolidated statements of accounts have shown some solid savings in costs, of which the most striking have derived from increased thermal efficiency and the economies that flow from the growing concentration of generation in the cheaper coal areas. In 1959/60, the savings in coal costs as compared with what they would have been but for these economies amounted to £13 millions. In addition, there have been many other illustrations of the steady drive for economy. The 1959/60 report of the Council shows that on the Area Board side there has been a reduction in the cost per unit for distribution, consumer service, meter reading and billing, administration and general expenses. These savings were, however, offset by increased interest charges, increased payments for local rates (it is worth pointing out that the electricity industry paid in rates some £24 millions, as compared with about £68 millions paid by the whole of private industry), by salary and wage awards, and by higher figures for depreciation which have already been mentioned. Nevertheless, the over-all result shows that total costs per unit sold fell from 1·507d. to 1·472d.

Why, then, was the surplus for 1959/60 not higher, especially when it is remembered that an *extra* £3 millions profit was made in the business of contracting and sale of fittings? The answer lies in the characteristics of the tariffs. In the case of most industrial tariffs, reductions (or increases) in the cost of fuel are passed directly through to the consumers by the coal price variation clause. Since most domestic and other small consumers are on a two-part or block tariff, an increase in the average consumption per consumer results in a fall in the average price per unit received by the Boards, since the additional units are sold at the "marginal" unit rate. In 1959/60 the

average revenue received per unit sold by the industry as a whole was 0·048d. less than in 1958/9, equivalent to a 3 per cent. reduction in average price.

Before leaving this aspect of our subject it is necessary to emphasize that the Boards are *individually* responsible for their financial results. It is convenient to refer to the "industry" in discussing the over-all achievements and problems, but the Board by Board responsibility is a reality. The annual reports show that the financial out-turn varies very much from Area Board to Area Board, mainly as a consequence of the timing of retail tariff adjustments but partly as a result of the incidence and scale of the winter peak demands. If the surpluses necessary to achieve the 1958/65 self-financing programme are to be earned, individual Boards will require to increase tariffs to the extent that cost increases cannot be met from even greater advances in efficiency.

It is in a way unfortunate that the expression "surplus" is used to describe the difference between the revenues of the Electricity Boards and their costs. Surplus connotes something left over and, by inference, available for distribution. The surpluses of the electricity industry are not available for distribution. To the extent that they are not required to cushion the Boards against short-term financial changes, they are in effect planned as a small contribution from consumers towards the development of the Boards' undertakings. Like the depreciation provisions, surpluses go straight into the purchase of assets. Nothing is "left over" in the colloquial sense.

CAPITAL PROGRAMMES

The process of capital planning starts with the forecasting of future demand. For certain purposes very long-term estimates are needed. For reasons of space these paragraphs will be limited to a discussion of the industry's 5–7 year planning.

Forecasting Demand

If the winter peak demands on the Central Electricity Generating Board (adjusted to "average cold-spell" conditions) from 1948/49 to 1959/60 are plotted on a semi-logarithmic scale, they show a fairly close straight-line fit to an annual growth rate of 7 per cent. The industry has, each year, to make up its mind whether this steady load growth will continue at the same rate, whether it will accelerate, or whether it will slow down over the following five to seven years—the period needed to plan, design, manufacture and instal new generating capacity.

Each Area Board makes a sales forecast in the light of its local knowledge of developments in industry, housing and so on, and according to certain agreed general assumptions. These Area estimates are then aggregated and compared with national estimates (both of consumption and of maximum demand) made by the Generating Board and the Electricity Council.

The long-term load forecasts, assuming "average cold-spell" conditions, when adopted by the industry, enable the Generating Board to determine three programmes of generating capacity: a firm programme for the fifth year ahead, a provisional programme for the sixth year and a tentative programme for the seventh year. In determining these programmes, estimates are made of (i) the very old plant which will still be serviceable and economic, (ii) the total plant in existence which will be available at time of system peak, and (iii) the allowance to be made for abnormally cold weather. Load forecasts must similarly be translated into requirements of transmission capacity and Area Board networks.

Inevitably, there is scope for error in these forecasts. A study of past forecasts shows that the tendency has been to underestimate demand rather than to over-estimate it, but the shortfall in generating capacity has been bridged by the improved availability of plant. So much of this improvement is, however, now embodied in the forecasts of capacity expected to be available that future underestimating of demand would have more serious consequences.

The primary purpose served by the annual long-term national forecasts of future consumption and load is to give an early indication of changes in trend. If the estimates were to show a movement away from the past trend, they would be a signal to those concerned to identify the forces at work. Today, practically the whole of industry and commerce, 95 per cent. of the homes and over 80 per cent. of the farms are already using the public electricity supply. The rate at which new consumers are connected must soon begin to decline. Therefore, although over-all demand is at present rising as briskly as ever, the industry is working to a generating programme slightly below the trend line, on the assumption that any consistent departure from it is likely to be downwards rather than upwards. Whether it is prudent or not to assume this slight drop in the rate of demand increase, time alone will tell. It can, however, be said with assurance that the forecasts on which new plant commissioning is based err, if at all, on the low side.

Suppose, however, that despite the indications, the long-term demand forecasts turned out to be over-estimates. What would be the cost? More plant would have been installed and would have become available than was needed in the year of commissioning. This over-provisioning would, of course, be rectified by a lower provisioning for the following years, but for the year concerned the over-provisioning would be equivalent to a replacement of the oldest plant still in service. The new plant would come into immediate base load operation, since it would be the most efficient; the plant rendered idle would be the least efficient. All plant in between would move down the order of merit which determines which plant is brought into use as load increases. It follows, therefore, that the over-provision of *additional* plant would be uneconomic only to the extent that *replacement* of the very oldest plant was uneconomic.

Hitherto, practically the whole of the new plant has been installed to provide additional kilowatts. Only the smallest of the most inefficient and in some cases unserviceable generating units have been taken right out of commission. The Generating Board have recently made a study (as did the Central Electricity Authority before them) of whether plant replacement on a more significant scale would be economically justified. The exercises showed that, if the tranche of old plant under consideration were scrapped, there would be only a slight loss on the transaction after meeting capital charges.

Capital Programmes

Revised forecasts of future load are made in the spring and summer, after each winter's peak experience. Capital budgeting, however, must follow the accounting year of the industry: namely, the year to the end of March.

Each Board is under statutory obligation to consult with the Electricity Council (in effect the central forum for the industry) about its programme, after which the Minister's approval has to be secured. The process is as follows. Each Board prepares in December/January forecasts of capital expenditure, internal resources and borrowing requirements for each of the six years beginning on the following 1st April. The procedures for doing this are broadly the same as in other large industrial undertakings, so there is no point in elaborating them here.

The Boards' forecasts are forwarded to the Electricity Council in mid-January. Copies of the Boards' estimates are

sent by the Council immediately to the Ministry, so that the process of consultation and approval may be concentrated into as short a period as is consonant with efficiency. Consultation between Boards and Council headquarters takes place in the next ensuing two months and the capital estimates are reviewed by the Finance Committee of the Council and then by the Council itself. By the time this process of consultation is approaching completion, the Boards will have experienced one more winter's weather, and in the light of this later knowledge of peak demands the Boards and Council may modify their forecasts and estimates.

When the Council has completed its review, it submits to the Minister of Power a consolidated statement of programmes for the industry as a whole. Having made his own review, the Minister gives approval, in July or August, to the Boards' programmes and to the incurring of capital expenditure of a certain amount (which may, of course, be less than was proposed) during the succeeding year, and provisional approval for the year beyond that. And so the process goes one step forward each year, the provisional figures being finally approved or varied, and a new set of provisional figures being adopted for the next ensuing year.

Although no formal decision is taken about the projected expenditure in the years beyond the first two, the industry must inevitably commit itself to such expenditure, since much of its equipment takes longer than two years to order, build and instal. While the aggregate figures for the more distant years necessarily contain an increasing element of conjecture, these long-term estimates are an essential part of the industry's planning and, in view of their size, are necessary to the government's consideration of major financial and economic policy.

In between the annual reviews, all the Boards supply the Council quarterly with revised estimates of their capital expenditure, their borrowing requirements and their forecast trading results for the current and two following years. Furthermore, they inform the Council each month of their capital expenditure incurred and the probable actual expenditure for the year against the current year's approved capital budget.

These monthly and quarterly returns are designed to ensure that the Council receives early warning of any variation from the adopted forecasts. It must be appreciated that quite large variations are possible for reasons beyond the control of the industry itself.

The timing and rate of completion of work, however carefully planned and progressed by the engineers—and much attention is being paid to this—is subject to the hazards of weather, illness, technical setbacks and strikes. Some deviation between the time pattern of actual expenditure and the pattern assumed in the estimates made more than a year earlier is inevitable. With entirely new engineering projects, such as the large nuclear power stations, the difficulty is even greater, since there is so little experience to serve as a guide. All in all, with contracts of £500 millions on hand, a difference in time pattern can easily throw £10 millions to £20 millions from one year to another. What really matters is to get the money spent on construction in such a way that none of it is unnecessarily idle.

On the Area Board side, there are other difficulties in capital forecasting. The Boards' forecasts are based on their estimates of the demands which they are likely to have to meet for supplies to existing consumers and for the connection of new consumers, and these demands are liable to material variation at short notice. It cannot be emphasized too often that the Boards are bound by statutory and near-statutory obligations. They have to furnish new and additional supplies, they have to meet the increasing demands of existing consumers, and at the same time maintain supplies within stated limits of the declared voltage. These demands are largely outside the Boards' control. The Boards estimate, as accurately as they can, the demands which they are likely to have to meet within a given period. If, however, there is an unexpected acceleration in house-building or factory construction, or if the load from existing consumers increases more rapidly than forecast, the Boards have no option but to meet these increased demands at the earlier date, if necessary seeking increased authorization to cover the additional capital expenditure involved.

If Area Board networks were easily capable of carrying existing loads, the cost of an unexpectedly large upsurge of new connections could be met without serious embarrassment by decreasing the capital work on reinforcement. Unfortunately, shortage of capital over the years has left the Boards with networks which in many places are seriously inadequate even for present loads. In these conditions Boards cannot carry unexpected increases of demand without extra capital unless security of supplies is to deteriorate still further. It was, in fact, necessary this spring to ask the Minister to increase the capital authorization for 1960/61, which he made in August, 1959, since

experience over the last autumn and winter has shown a recovery in the economy, and hence a demand for electricity, greater than had been forecast.

COUNTER-CYCLICAL BUDGETING

When the pressure on the total resources of the community is too high there is, rightly or wrongly, growing criticism of the level of government expenditure. This criticism rarely distinguishes investment expenditure from the rest. It seems a little hard to those involved that, while increasing investment programmes in the private sector are regarded as meritorious, public sector investment, however productive, is regarded by some as though its sole purpose was to make life difficult!

The investment programmes for electricity supply are designed to meet the customers' demands. They cannot be turned on and off just as happens to suit other considerations. The capital projects are large and inter-connected in a complex manner. Once contracts are let they must run their course. The Generating Board is a big ship: it cannot alter direction like a corvette. The Area Boards, though less tied by long contracts, do a considerable amount of their own capital work, and cannot increase and decrease the size of their constructional teams rapidly and extensively without serious loss of efficiency.

It is therefore easy to over-estimate the extent to which the electricity supply industry, without serious loss of efficiency and higher cost, can help to counter changes in the pressure of total demands on total resources. Nevertheless, something is possible and in this connection a lesson can be learnt from recent experience.

In the autumn of 1958 the Area Boards were given authority to increase expenditure. They were also permitted to bring forward work into 1959/60, in the quite correct expectation that, over-all, 1959/60 would be an easy year and 1960/61 a difficult year from the standpoint of pressure on resources.

Although the figures involved were not large, they were significant; they helped the economy through the stimulus given to employment and helped the industry to make good a little of its backlog of capital works. What we did not fully allow for, however, was this: although capital expenditure on the electricity system can help the pump-priming exercise, electricity is one of the first industries to feel the effect of pump-priming. As the economy revives, more new houses and more new factories and shops need connecting, and existing consumers

demand more power through the networks. Therefore, an increase in electricity capital expenditure can be succeeded by a reduction (or reduced rate of increase) only if there is distribution capacity in being to meet the demands resulting from the pump-priming itself. The upsurge of demand in 1960/61 could not be accepted on the systems without capital expenditure exceeding the original estimates. In short, if the electricity supply industry is to play a part in counter-cyclical operations, some fat must be put on the systems first. At present the bones of the distribution networks are almost showing through the skin.

THE LOAD FACTOR

The capacity of the electricity supply industry is more fully used than most capital assets in British industry. Nevertheless the large capital requirements of the industry demand that strict attention should be paid to the problem of the peak.

The problem is being tackled in three ways. First, in the field of generation, the development of the super-grid enables the fullest use to be made of capacity and therefore reduces the spare plant that must be available for peak use. In addition, special projects are in hand. A pumped storage scheme of 300 MW is being constructed at Blaenau Ffestiniog, where electricity will be generated at hours of peak demand from water previously pumped up to a high-level reservoir by electricity produced at the most economic stations in off-peak hours. A cross-Channel link with Electricité de France has been arranged, enabling 160 MW to be transferred in either direction with considerable saving, because of the difference in peak hours in the two countries.

Secondly, the industry is seeking to stimulate (a) existing uses, such as refrigeration and water heating, which offer long hour use or have a high diversity between individual consumers or, best of all, generally fall off-peak, (b) new developments in load improvement, e.g. user equipment with thermal storage characteristics such as floor warming and block storage heaters, and (c) new techniques in industry, such as batch annealing of steels, which offer possibilities of load reduction at peak times.

Thirdly, the industry seeks through its tariffs to relate prices to costs. The Generating Board have so framed the bulk supply tariff as to recover their fixed costs fully in the charge paid by each Area Board per kilowatt of maximum demand put on the system by that Board; only the bare running charges are recovered in the rate per unit consumed. In 1960/61, there

was introduced a new feature of the bulk supply tariff, namely special terms for loads which can be restricted by not less than 25 MW by the Generating Board during short peak periods. A rebate of £3.19.0d. on the normal annual kilowatt charge of £7.2.0d. will be allowed to Area Boards for such loads. Area Boards all offer industrial and commercial consumers tariffs made up of components proportional to the maximum demand and to the units purchased, with reduction in the unit charge related to higher load factors. Special inducements are offered to industrialists who can curtail their demand during peak periods and take extra supplies at other times. Low rates are offered to all classes of consumer for supplies made available only during specified off-peak periods: for instance, at nights and week-ends. In 1959/60, 30 per cent. more units were sold than in the previous year on restricted-hour and other off-peak tariffs.

It is important, despite the enthusiasm for low unit charges in retail tariffs, to ensure that they are kept slightly above marginal costs. It is necessary to avoid slipping into the position where increasing volume of business results in lower rather than higher surpluses.

COST AWARENESS

The electricity supply industry is strongly expanding and, in certain fields, subject to little competition. The classical pressure of inter-firm rivalry which is important in many industries is partially, though not wholly, absent from the sale of electricity. Nevertheless, the Boards are cost-conscious and fully alive to the need for economy and improvements. Many examples could be given were the space available. The research programme is increasing rapidly, revenue expenditure having risen from £900,000 in 1958/59 to £1,400,000 in 1959/60, with big laboratory extensions in hand and a good deal of development work not covered by the research figures. There has been a long and intensive drive to secure maximum scale and location economies, with generating sets on order up to 550 MW and stations being developed for as much as 2000 MW on cheap-coal sites. The super-grid is being pressed forward and distribution systems developed (within the limits of capital available) to ensure that plant is run in merit order so as to secure the lowest over-all costs. The period between initiating and completing capital projects is being shortened. Standardization of equipment and purchasing arrangements are constantly under review. Boards

have achieved significant reductions in the levels of their stocks of equipment. Economic appraisals are being used not only at senior levels but also down the line. Modern computing and programming devices are being employed in order to operate local and national systems at high efficiency. Management and staff training schemes are a feature of the industry and are constantly being developed.

There is a risk that this article will have sounded either defensive or complacent. It is intended to be neither: the industry is proud of its achievements but well aware how much remains to be done.

Ronald S. Edwards.

London.
September, 1960.

Publications Received

THE COMMONWEALTH AND EUROPE

(The Economist Intelligence Unit Ltd. Price 42/-)

Britain's relationship with Western Europe, as Lord Salter points out in the foreword to this book, is one of the great political issues of our time. On the economic side, however, a major complication is by what means the system of Commonwealth trade could be reconciled with British participation in the new trading forms developing across the Channel. *Britain in Europe*, an organization composed of leading industrialists and trade unionists, commissioned *The Economist Intelligence Unit* to collect and analyse the relevant facts. This study is the result, a companion volume to the *Unit's* "Britain and Europe."

It is a major and thorough piece of work, with a mass of factual and statistical material that will be invaluable to all concerned with the different aspects of this problem. The first part considers the pattern of Commonwealth trade, and examines the main commodities in turn. The second deals with the development of Commonwealth economies and the impact on that development of European economic integration, the Commonwealth being considered country by country. Detailed trade figures are given in appendices.

In the end, as has been argued more than once, the question is not one of economics. "The choice is political," concludes this study. "Do the British, despite the risk of material loss, wish to stand aside from the Continent of Europe? Or are they now willing to make a whole-hearted political commitment? The task of this book was not to answer these political questions, but to find out whether the economic problems created in this context by Britain's relationship with the Commonwealth can be solved. The conclusion is that they can."

Italy as a Study in Development

By Vera Lutz

THE efforts made in post-war Italy to industrialize, and to raise income levels, in the Southern part of the country have been watched with special interest by students of the problem of economic development. The problem seemed less vast in this area than it obviously was in many other parts of the world, and it was met with great determination by the Italian authorities. Italy thus seemed an example which might show results fairly soon; and now that the development programme has been in operation for roughly a decade, the time is ripe for doing some first general stock-taking of the results. These have in fact been an acknowledged source of disappointment for many local observers, who expected a much more rapid rate of industrialization and of income growth than has actually occurred.

NATURE OF THE PROBLEM

The dimensions of the problem as it presented itself in Southern Italy may be indicated by a few basic facts.

Five Regions on the Southern mainland and the two Islands of Sicily and Sardinia together constitute the area now generally called the "Mezzogiorno". They contain a population of close to 19 millions, or about 38 per cent. of the Italian population as a whole. Estimates of the regional distribution of national income are inevitably very rough. They indicate that, in the early 'fifties, income per head of the population in the South averaged between 45 and 50 per cent. of that in the North. The average for Italy as a whole was in turn only about 40 per cent. of that in the United Kingdom.

According to the 1951 Census, only 39 out of every 100 were in the active labour force in the South, compared with 46 in the North. The main reason for the disparity was the small participation of women in the South. Over half of the active population in the South was engaged in agriculture (compared with one-third in the North); and it was a poor, overcrowded agriculture, yielding an income per head well below that earned

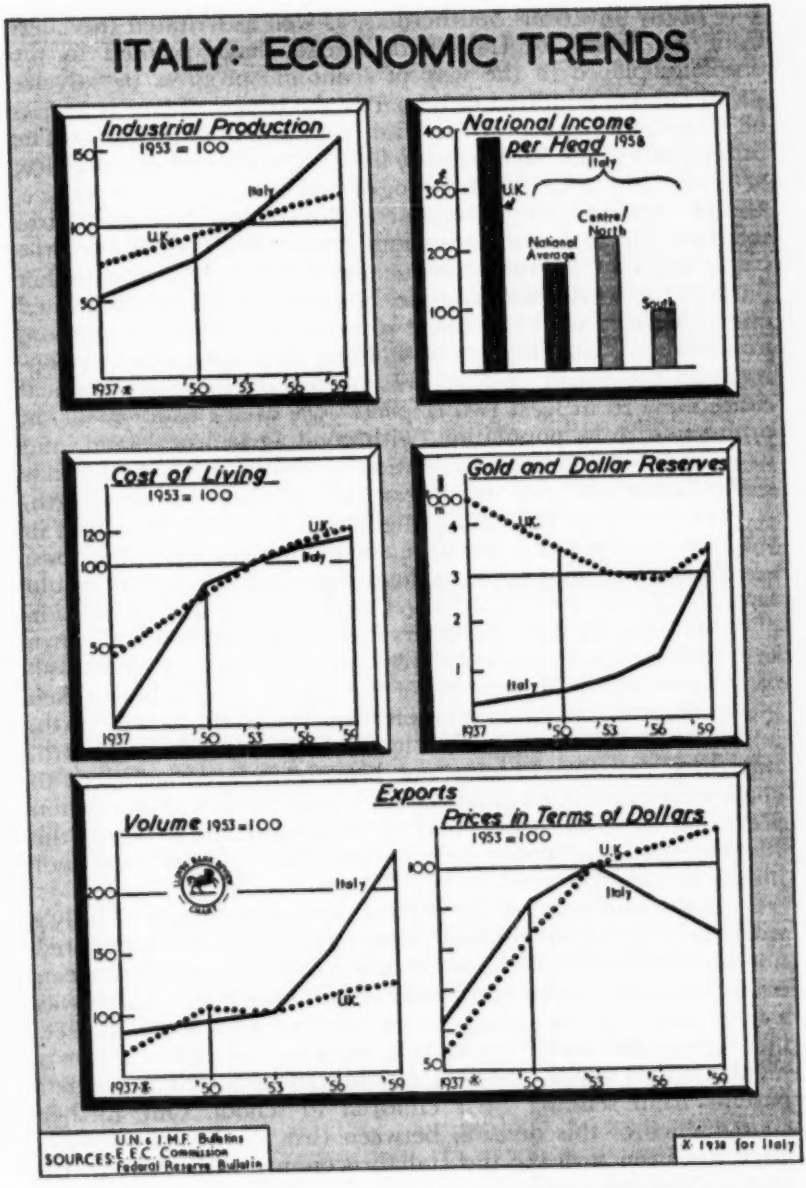
Dr. Vera Lutz, trained as an economist in this country before the war, writes on economic matters and, together with her husband, Professor Friedrich Lutz, is the author of *The Theory of Investment of the Firm.*

in the North, even if the latter area, too, contained zones of extreme agricultural poverty.

In 1951, again, only about 734,000 persons in the South were employed in industry (inclusive of construction), out of a total for the whole of Italy of 4,242,000; and the Italian industrial labour force as a whole was small in comparison with those of other large Western European countries having more mature industrial economies. In the North, one in five were employed in manufacturing industry; in the South, only one in twelve. Even in Denmark, an agricultural country *par excellence*, the corresponding figure is about one in seven. Most of the manufacturing industry in Southern Italy was of the "traditional" or artisan type, concentrated in those trades (food processing, the wood and furniture industries, small repair shops) which are the first to make their appearance in a poor agricultural society and are individually very small. More than half of all persons working in Southern industry (manufacturing and other) were, at the Census date, attached to units employing ten or fewer persons.

Even in Northern Italy, some of the same signs of a comparatively early level of industrial development were present, though in less marked degree. The process of economic development ushered in by Italy's industrial revolution of the last decades of the nineteenth century was very incomplete. It left about half of her population behind, mostly in a primitive agriculture but partly in a primitive industry, both conducted on a minute scale, with low employment of capital, with small application of modern techniques, and with correspondingly low levels of productivity and income. The problem of the *under*-employed, as we may call that part of the labour force which has remained in these backward working conditions, concerns a much vaster number of people than does that of the *un*employed, or those totally without work.

The greater part of this low-productivity and low-income group is, it is true, concentrated in the Mezzogiorno, and it is the problem of "under-development" in this area that has inevitably drawn most attention. The "Southern problem", or "problem of the two Italies", was already very much present to the minds of Italian scholars and statesmen at the beginning of this century; and a start was made at that time towards trying to solve it by a policy of aiding the South. This early policy relied on some of the same instruments (public construction work and tax relief for private industry) as have been used more recently, though—judged by present standards—it was no doubt very modest in scope.


ITALY: ECONOMIC TRENDS
Industrial Production
1953 = 100
Italy
U.K.
1937 *
'50
'53
'56
'59
National Income per Head 1958
Italy
U.K.
National Average
Centre/ North
South
Cost of Living
1953 = 100
U.K.
Italy
Gold and Dollar Reserves
U.K.
Italy
Exports
Volume 1953 = 100
Italy
U.K.
Prices in Terms of Dollars
1953 = 100
U.K.
Italy
SOURCES: U.N. & I.M.F. Bulletins
E.E.C. Commission
Federal Reserve Bulletin
* 1938 for Italy

Many illustrious Southerners, as well as irritated travellers from the North of Italy and abroad, have pointed to the obstacles placed in the way of economic progress by adverse social factors, admitted to be partly the legacy of past centuries of misgovernment prior to Italy's political unification. The inhabitants of the Mezzogiorno have been accused of indolence, of being ridden by superstition, of lacking a social conscience, and of showing little entrepreneurial initiative. It is difficult to tell how far such traits—assuming they really exist—are the cause and how far the consequence of poverty. In many other parts of the world, for example, Southern Italians have turned out to be hard workers. There seems to be a fair presumption, in any case, that a big rôle in holding back economic development in the South of Italy was played by the poor physical conditions. In at least two respects—the area's endowment, in proportion to its population, with good agricultural land, and its geographical location in relation to the major foreign markets—the South was very much less well off than was the North.

The classical economist might well have expected that in the absence of political frontiers, and of immigration restrictions, economic conditions between the two parts of the country would in the long run have tended to get levelled up by a redistribution of population. In fact, it appears that the population has grown over the last hundred years at very nearly the same pace in each of the two areas. Movements of the kind expected have taken place: there has been emigration from the South to the North, and more overseas emigration in the South than in the North. But these movements have not been on a scale sufficient to change the population balance. Since Italy's political unification a century ago, the proportion of the population living in the Mezzogiorno has never been lower than 36 per cent. nor higher than 38 per cent.

At the mid-point of the present century, one part of Italy's working population enjoyed living standards that compared not unfavourably with those of the workers in the European countries to the North and West; but another part—and it was a large one—was dragging out its existence on a meatless diet, in overcrowded dwellings lacking sanitary arrangements or a regular water supply, and in circumstances which prevented parents from sending their children to school. One further consequence of this division between two parts of the labour force has been to leave the Italian economy with what is, by modern western standards, an exceptionally low ratio of skilled (or even educated) workers to unskilled (and sometimes uneducated or illiterate) workers.

That this kind of dichotomy in economic conditions was able to develop in such marked degree and to persist for so long within the borders of one and the same country is itself a problem of some interest. Probably it must be attributed partly to the early growth of trade union power and the setting of wages above the "natural" level, and partly to restrictions on internal migration, such as were imposed under Fascism. The effect has been very much the same as that produced in certain other countries by the colour-bar.

This cleavage within the Italian economy is relevant here as a reminder that Italy's Southern problem does not properly fit into the same analytical framework as suits a self-contained country which is *in its entirety* only now on the threshold of industrialization. It is relevant also for another reason: namely, that Italy's experience in this regard may be an instructive case study for countries that are now at this latter stage; for it illustrates a type of distorted economic development which may conceivably repeat itself, unless measures are taken to avoid it, in other instances of industrialization—especially, perhaps, of late industrialization.

THE THEORY BEHIND THE SOUTHERN PROGRAMME

The problem of Southern Italy has in practice, however, been treated very much as though the area were a self-contained country. The remedies applied have, that is to say, contained a strong ingredient of regional economic separatism. The experiment of the last ten years may thus also have lessons to teach from this other point of view. The government's programme was based on some of the most up-to-date theories of economic development. These had inspired the new generation of policy-makers for the South with a fresh optimism, after the wave of pessimism that had followed the earlier verdicts of those who had summed up the condition of the South as one of "natural poverty". They seemed to hold out the promise that the problem could now be solved with comparative ease, provided only that sufficient resources were made available for investment in the area.

The Southern economy was seen as needing, in the first place, more of the "social fixed capital" (roads and railways, water mains, sewers and so forth) which constitutes the so-called "infrastructure" of industry. It needed a strengthening (by investment) of its agriculture. This was also conceived as belonging to the "infrastructure", since it provided materials for industrial processing and a market for industrial produce. The South also needed more ample sources of industrial finance.

And it needed a strengthening of the so-called "external economies" of industrial growth which are supposed to turn the industrialization process, once started, into a self-propelling process. These must here be understood in the very broad sense of all the advantages which one industry reaps, in terms either of reductions in its costs or of the widening of its market, from the simultaneous growth of other industries. Professional and official opinion alike placed great faith in the stimulating power of these "external economies", and seemed to see in them a sufficient explanation of how a rapidly expanding local market for industrial produce was going to emerge in the South.

The keynote of this theory, then, was that investment would encourage investment, and that this process would make good for the low provision of the area with capital equipment in the past. More, it was expected also to compensate for the area's poor endowment with natural resources. Once Southern industry had been helped through its infancy, it would grow spontaneously without the further need of special aid from the government.

How has this theory worked out in practice?

MAIN FEATURES OF THE POLICY

The policy measures taken with the object of applying the theory have been many and varied. They have entailed a great deal of new legislation and the foundation of a number of new institutions. They have embraced a wide variety of public investments and of special incentives to private industrial investors.

In the public investment field, the chief responsibility for the special Southern programme (as opposed to the ordinary programmes of the various Ministries which make investments in North as well as South) has fallen upon the *Cassa per il Mezzogiorno*. This institution was founded in 1950, began operations in the following year and has a lease of life which, having been twice extended, now runs to 1965. The total sum allocated out of public funds for spending over the fifteen years amounts to over Lire 2,000 milliards (about £1,100 millions). The annual rate is close to 4 per cent. of national gross investment expenditure. According to a recent official report, moreover, a good proportion of the ordinary public works expenditures of the individual Ministries has, over the past decade, gone to the benefit of the South, which has had more than its share of the total on the basis of population and more than was laid down as its share in 1957 by law. Important among these "ordinary" expenditures were those (on land improvement,

housing, roads, farm stock, trees) connected with the Land Reform Programme, also initiated in 1950. For this, too, affects primarily the South. Two-thirds of the land allotted (in very small average amounts) to peasants were situated in the South; and the proportion of the expenditure on improvements that has gone to the latter area has been as high as this, or higher. The *Cassa* has also been the agency through which the International Bank for Reconstruction and Development has lent to Italy. The seven loans made during the 'fifties (one of them in conjunction with the European Investment Bank) totalled nearly $320 millions.

One of the principal tasks of the *Cassa* has been to help build the "infrastructure" of industry. Under this head a big item has been agricultural improvements. Total investments made by the *Cassa* over the first nine years, either directly or by third parties with finance from the *Cassa* (inclusive of what came from International Bank funds), amounted to close on Lire 1,000 milliards. Just about half were for the purpose of agricultural improvements. (The figures are exclusive of the investments connected with Land Reform.)

The agricultural investments have been of the "traditional" type: irrigation and land improvement works, the construction of water-control systems and reservoirs, reafforestation in mountain areas. The total "area of intervention" which the *Cassa* counts on eventually covering is a vast one, equivalent to no less than 70 per cent. of the entire territory of the South. Some experts believe that, by the time this programme has been completed, few profitable investment opportunities of the kind will still remain unexploited. They believe that irrigation, for example, will have gone about as far as it can do on an economic basis.

The scope for improving, in this and other ways, the productivity of land by investment is now fairly generally admitted to be a comparatively narrow one. It is likewise accepted as a fact that agricultural improvements alone cannot —with the Southern population at its present level or growing further—make a very big contribution towards raising the *per capita* income level in the area. Here again, the optimism which many people felt during the early post-war years has been dampened by experience. The same applies to Land Reform. The problem of agriculture in the South remains essentially unchanged. The holdings are almost everywhere either too infertile or too small to yield a reasonable living to those who work on them. The only effective remedy is relief of the population pressure on the land.

Other important items in the *Cassa's* investment programme up to date have been road building and the construction of water mains and sewers. During the first nine years it constructed over 1,500 kilometres of new roads and improved 11,000 kilometres of old ones, besides improving the railway system. During this same time it built water mains serving nearly four and a half million people; and it has undertaken the much bigger task of seeing that all inhabited centres in the Mezzogiorno are provided with water mains by 1965. When it is recalled that, in 1951 (at the Census date), just over half the dwellings in the South were unprovided with any regular water supply, it is obvious that this improvement alone must make an enormous difference to living conditions among the people concerned.

The same may be said of the opening up to motor traffic of many areas that had previously been closed to it. In some cases, however, the new facilities serve areas that clearly have no sort of economic future. Some of the elegant new roads leading up to clusters of insanitary hovels on mountain tops are merely an invitation for people to go away along them. Many of these areas of bare subsistence farming are bound to be depopulated as part of any programme which seriously aims at raising income levels. Some of them have already been forsaken by those of working age, in response to the better employment opportunities that have opened up for them over the last ten years in the lowlands. And it has been a widespread criticism of this part of the *Cassa's* programme that it was not based on any clear notion of what the future geographical pattern of agricultural and industrial activity might be. Nonetheless, it would surely be an exaggeration to pretend that whatever element of waste there has been in the *Cassa's* programme is to blame for the failure of the pace of the industrialization process to come up to expectations. The reasons for this must be sought elsewhere.

ENCOURAGEMENT OF INDUSTRY

The realization that the improvement of agricultural productivity in the South could not go much of the way towards providing the desired increase in the income per head of the Southern population, so long as the latter remains at the present level or goes on growing, has caused attention to be increasingly concentrated on industrialization. The *direct* encouragement of this (as opposed to the mere building of the "infrastructure") has come to play an increasing rôle in the programme of the Cassa itself. It was, however, quite early on that the government began offering direct incentives to industry.

Two main directions were followed. One was to grant relief from taxation and from certain cost items. One of the principal early measures, taken towards the end of the 'forties, exempted from the national income tax[1] (amounting to 18 per cent., or since 1959 18–20 per cent.) profits earned over the first ten years in new Southern establishments or from the expansion of old ones. A later law (of July, 1957) made further concessions in connection with retained earnings used by any firm in either North or South for financing industrial or agricultural investments in the latter area. Other items of relief relate to various taxes on property transfers, contracts and other legal documents. Reduced railway rates, and exemption from import duties, for construction materials and equipment are other items which have during the last decade lowered the costs for new or expanding industrial establishments in the South. Since mid-1957, capital subsidies have also been available in selected cases. As time has passed, the measure and scope of these various kinds of financial aid has become continually broader.

The second direction followed was that of making capital more easily and more cheaply available to Southern industry, and most especially to the small or medium-sized concern. In this connection, several new financial institutions specializing in medium-term lending to Southern borrowers were founded. They have drawn their resources partly from the *Cassa*, partly from other Treasury funds and partly from loans placed on the market. The government has also granted subsidies towards the interest rates charged by these institutions on loans to customers, so as to allow the latter to be accommodated at lower than "market" rates.

Here, too, there has been a continuous movement towards more and more generous terms. Since 1953, at least, the special financial institutions have disposed of ample resources for lending to Southern industrialists with "sound" investment projects. The rate of interest charged has been continually reduced. "Small and medium" sized concerns (defined as those employing up to 500 persons and with a total capital investment, fixed and circulating, of not more than Lire 3 milliards) are now accommodated at 3 per cent.; even larger borrowers can obtain finance at from 4 to 5 per cent. The loans may run for terms up to 15 years, with amortization beginning only after the fifth year. A certain amount of finance on these terms may now be had to cover investments in stock as well as in equipment.

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[1] This levy amounts to approximately a half of the total rate of tax—partly imposed by the local authorities and partly consisting of a special national tax on the earnings and capital of companies in addition to the ordinary income tax—that falls on company profits.

For many years, business in the South has been able to borrow on terms distinctly more favourable than those prevailing in the North of Italy or even—over much of the time—in others of the major industrial countries. Profitable concerns have, moreover, been aided in the process of self-finance by the tax concessions.

The many forms of special aid granted to Southern industry during the 'fifties gave it substantial and increasing possibilities of offsetting initial cost disadvantages which it might have with respect to Northern competitors. Despite the complaints that many applications for loans were refused (probably on the grounds of their low credit-worthiness) it seems unlikely that, over the last six or seven years at least, many solid industrial investment projects have been held up by lack of finance. It appears improbable that this factor, any more than the alleged shortcomings of the *Cassa* mentioned previously, provides an explanation of why industrialization was not going ahead faster.

Alongside these incentives of an economic character, a certain amount of "moral suasion" has probably been exerted on some of the big Northern firms to set up plants in the South. The quite astonishing suggestion was being voiced in 1956 in semi-official circles that steps should be taken to prohibit further industrial expansion in the North until Southern industrialization had proceeded far enough. This proposal was fortunately never given concrete shape. But it is probable that gentler forms of persuasion, bound up with notions of prestige and social duty, have been partly responsible for some of the investments made in the South by Northern industrialists. If profit prospects alone had been considered, these investments might have been fewer than they actually were.

MEASURES OF THE RESULTS

The results of the industrialization policy have been very much more modest than many people had anticipated. The percentage increase in employment in the South over the last ten years, in those sectors of manufacturing industry which are typically organized in the form of large-scale producing units, was probably of the order of 25 per cent., which means that it was well above the corresponding figure for the North. But in absolute terms the increase—amounting to some tens of thousands—is small: too small to provide much relief for the excessively high density of the farming population, and too small to push the area perceptibly nearer to that ratio of manufacturing employment to total employment normal even in

agricultural countries which have achieved higher income levels.

Estimates of the growth in income in Italy by region are inevitably very rough. Three sets of such estimates, however, suggest that money income per head rose during the 'fifties by about the same percentage in the South as in the North. There was not any perceptible movement towards a levelling up. Attitudes towards this fact differ. One group of commentators stresses, as a positive achievement, the fact that the Southern population has over the past decade enjoyed a very substantial increase—of perhaps some 30 to 40 per cent.—in average real income per head. Not a few people in Italy would now be content that the gap in income levels between the two areas should continue, provided the income level of the poorer group continues to rise at the present pace. A second group is impressed most, however, by the lack of any tendency towards the closing of the gap.

What some people in this group had imagined might happen may be inferred from the figures given in the so-called Vanoni Plan drawn up at the end of 1954. This contemplated an increase in income over the subsequent ten years twice as fast in the South as in the North, so that by 1965 the initial income-gap between the areas would have been about halved. If we adopt the standards of this second group concerning the ultimate aim of the Southern policy, its success so far does look disappointingly small. And I believe that these standards prevailed much more widely ten years ago—before the results of experience made some people revise them downwards—than they do now.

EXPLANATIONS OF A "FAILURE"

About the reasons for the discrepancy between what occurred in practice and what had been promised by the theory, opinions may differ. Probably most close observers would agree that the obstacle to industrialization does not lie any longer in lack of finance. Even the shortage of skilled labour is not an ultimate explanation. The necessity for training labour—in so far as this is not shouldered by the government—does, it is true, burden industry with extra costs. But Northern industry has been facing the need to incur such costs increasingly in recent years, partly for workers "imported" from the South. The problem is thus an important one for Italy as a whole; it is not specific to the South. (The *Cassa* in the South, and other public bodies in both parts of the country, have been taking over a growing part of this task of labour training.)

One view that has numerous supporters, especially in official quarters, is that the main obstacle lies in a shortage of entrepreneurial initiative, and that the remedy is for the State to act as entrepreneur in the South. It has in fact been officially proposed that the State, acting through its two big holding companies, IRI and ENI, should play a much bigger rôle in this connection in the 'sixties than it did in the 'fifties. Under the law of July, 1957, the two holding companies are already formally obliged to allocate a large part of their investments to the South (40 per cent. of total investments and 60 per cent. of investments in new plants). Even if the law was not followed to the letter in the past, it is expected that it may be so followed in the future.

It is part of the current theory that, if the State sets up producing units in what are called the "propulsive" sectors of the economy, and in which the units have to be big, this will stimulate a spontaneous growth of private industry in the sectors in which the individual productive unit can be smaller. Among the big new projects already decided upon are the steel plant, to be built by IRI in the neighbourhood of Taranto in the deep South, and the petro-chemicals complex, to be built by ENI adjacent to the Gela oil-fields in Sicily. In certain quarters—some of them close to Northern industrialists, but not necessarily for that reason quite unworthy of attention—serious doubts are entertained whether these new projects are soundly based in terms of prospective revenues and costs. In the former case the choice of the location has been questioned, and in the latter the wisdom of utilizing poor quality oil which can be extracted only at abnormally high cost.

It is obviously difficult to prove or disprove the validity of the assertion that the supply of entrepreneurial ability is inelastic. There is, however, room for a strong suspicion that this may not be (any more than are some of the other factors so far mentioned) the real reason for the slowness of industrial development in the South. The recent experiment in this area may tend to confirm in their views those who have always regarded certain parts of modern development theory with scepticism. It seems as likely as not that what was wrong was the theory underlying the industrialization.

SOME DOUBTS ABOUT THE THEORY

Relying as it does on the stimulating effects of the "infra-structure", of the "propulsive sectors", and of the "external economies" of industrial development itself, the theory fails to

give an adequate explanation of how the market for the produce of Southern industry--on the scale desired—is to come into existence. The idea once prevalent in Italy that the "multiplier" effects of investment spending were going to create the market has perhaps lost many of its former supporters. The "external economies", to which great prominence continues to be given in official statements, are, we may suspect, not working as they were supposed to do. On the other hand, official opinion regards as outmoded the notion that importance needs to be attached to geographical location as a factor influencing an industry's chances of profitable expansion. Technological progress and modern economic theory are said to have dispensed us from the necessity of having much regard to this factor.

At this point, however, the doubt may assail us that certain physical facts of the Southern situation are being dismissed much too lightly. A major feature of the poverty of the South at present is the population's low consumption of meat and other high-quality foodstuffs. I am aware that some observers are saying that the first thing on which the poor want to spend any addition to income is a television set. That may be; for many of them food may take only second or third place. But if it were really true that all of these people were content, as their income increased, to demand only television sets, motor-scooters, and other durable consumers' goods, without at the same time demanding any more food, the industrialization of the South would be a much easier task than it has so far turned out to be.

So long as this is not true, an indispensable condition for the rapid development of the local market for industrial produce is the breaking of the food bottle-neck. It would be easy to see how this could happen if the agricultural picture in the South—its prospect for further improvement—looked much better than it in fact does. The alternative lies in industrial exports, which would in part go to pay for food imports. But the South, with its lack of important raw materials and, on top of this, its inferior location in relation to the main foreign markets, has at present—just as it had in the past—only very limited opportunities for engaging profitably in the industrial export trade; and there is no very sure sign that its position in this regard will improve greatly within the next decade or two.

In some or all of these respects, Southern Italy—always considered as though it were a separate "country"—may of course be in a much worse position than are many others among the "under-developed" countries. Its experience is not therefore necessarily a valid test of what might happen in these other areas.

One of the queerest things about the case of the South of Italy is, however, the very fact that this area has been treated as though it were in truth a separate "country". Treating it in this way is equivalent to denying it the advantage which its political union with an adjacent, and economically much more mature, area ought to have given it over most other "under-developed" countries.

Despite Italy's long tradition of mass emigration to foreign lands, the notion that large-scale internal migration may need to be accepted, and even encouraged, as a way of evening-out inter-regional inequalities in income levels has found few sponsors. Nonetheless, some commentators on the events of the 'fifties hold that the migration of Southern workers—partly abroad but mostly to the North of Italy—which actually took place during that period, and which probably amounted to many hundreds of thousands, made a bigger contribution towards improving the living standards of persons originally resident in the South, and of members of their families who sometimes remained behind living on remittances, than did the whole "Southern policy". A policy which ought, one might think, to be given more consideration in the future is that of assisted migration, accompanied by measures for removing certain disincentives—connected with the structure of taxation and of labour costs—which are at present probably keeping the expansion of Northern industry below its full potential pace.

The purpose of this population shift would be to permit the exploitation of the advantages which a Northern location still has—and will most likely continue to have over an indefinitely long future—for that expansion of industrial exports which is necessary if the poorer part of the Italian population is to be better fed than it is at present. This solution does not necessarily mean increasing the congestion in the relatively small area of the so-called "industrial triangle" Turin-Milan-Genoa. Areas not far distant from the triangle can absorb many more people before they reach the average population density which is tolerated over the greater part of industrialized North-West Europe.

In this, as in other contexts in economics, we cannot hope for "proofs". Even so, the results of the experiment in Southern Italy are at least suggestive of certain conclusions. They suggest, in particular, that the theory on which the experiment was based exaggerated the power of capital investment to compensate for a poor endowment with natural resources. It seems clear that it over-estimated the effects of the "external economies" of industrial growth and underestimated the importance which a

good location still has as a factor in industrialization. Concerning the last point, it has to be remembered that the geographical displacement, away from the optimum or preferred location, which is involved in "forcing" industrial development into certain Southern locations may often be measured not in tens but in hundreds of miles. The distance, for example, of Taranto from the Plain of Lombardy is about 600 miles.

PERSEVERANCE IN THE INDUSTRIAL LOCATION PROGRAMME

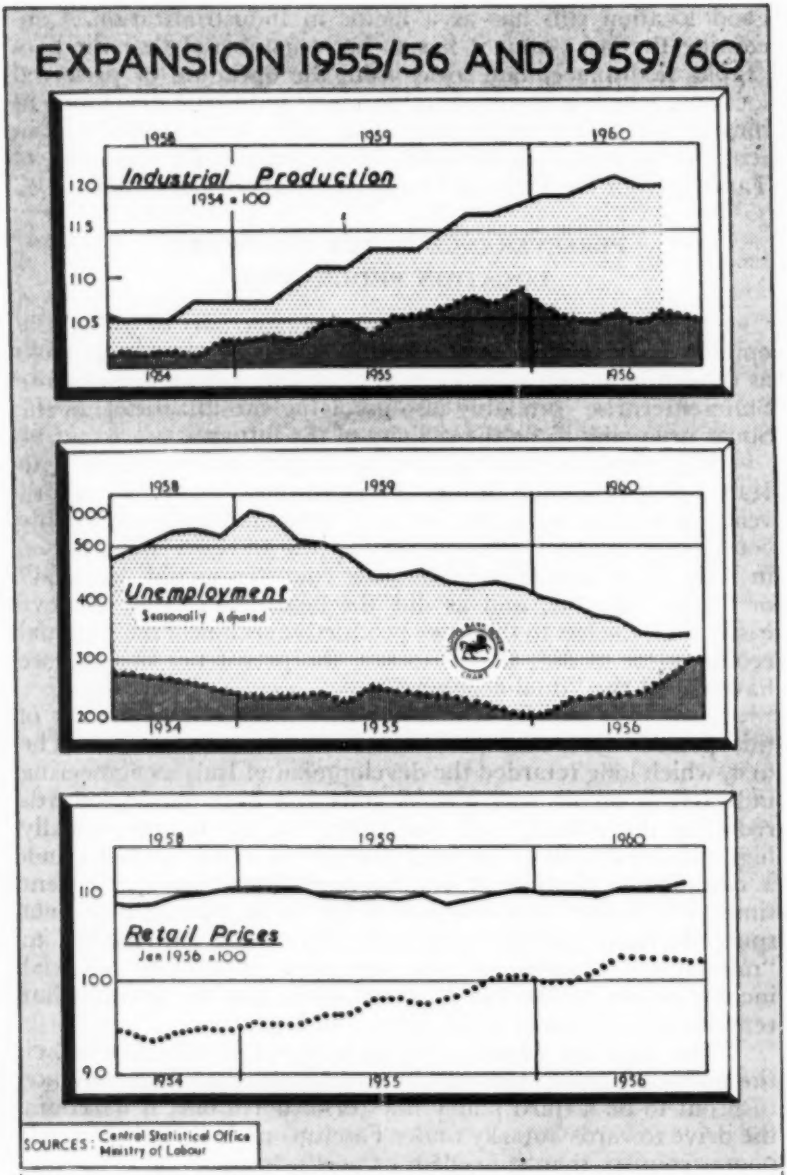
As already noted, however, the greater part of influential opinion in Italy is in favour of this "forcing" process. It looks as though increased subsidization of private industry, and more State enterprise (probably also involving subsidization), in the South are going to be the policies of the future.

This prospect falls easily but dangerously into line with Italy's past economic history. Over the last seventy or eighty years, a few questionable items of economic policy probably contributed as much towards keeping the *per capita* income level in Italy below that in neighbouring countries as did "natural" or "social" factors, and as did the failure of labour to move easily from the less to the more productive sectors of the national economy (or as did, that is to say, the persistence of what we have called the "dual economy").

Two such policies which played a large rôle over most of this period were steel protection and wheat protection. The first, which long retarded the development of Italy's engineering industry, is on its way out. A start has been made towards reducing the second, and thus correcting the uneconomically high ratio of cereals to livestock production which has been such a conspicuous feature of Italian agriculture. In very recent times, the Italian economy has at last been making a distinct spurt forward—which some observers have attributed to "miraculous" causes—in the direction of raising national income nearer to the full potential level. But the ground that remains to be covered is doubtless still large.

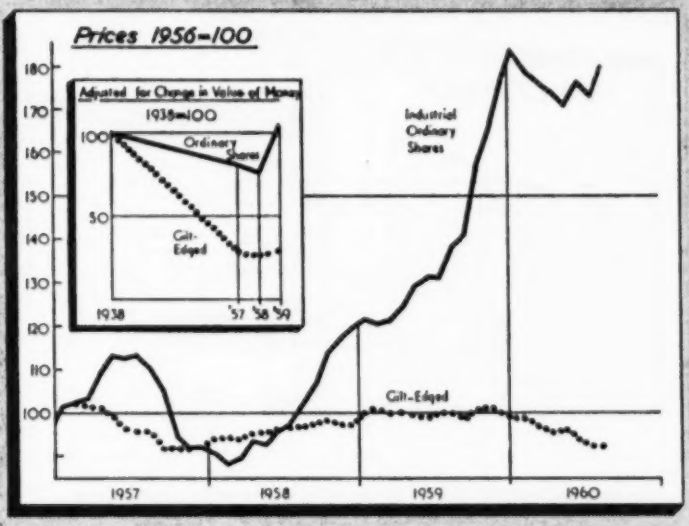
The question which needs to be faced in time is whether the policy of forcing industry into unsuitable locations may not turn out to be a third policy line (or a fourth one, if we count the drive towards autarky under Fascism) making Italy a much poorer country than it needed, or needs, to be.

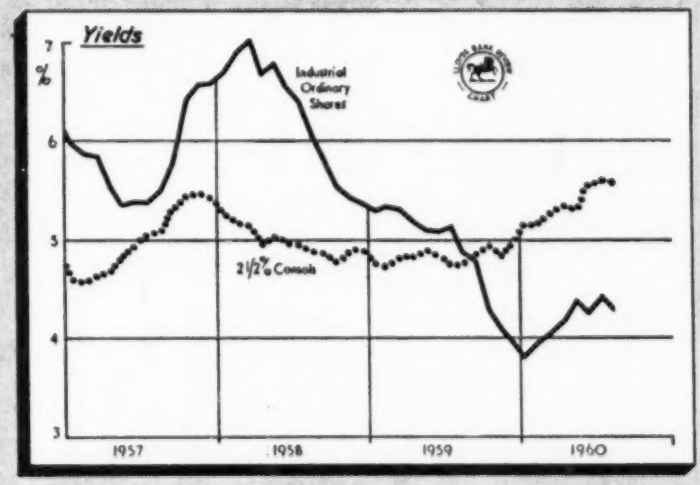
Rome.
July, 1960. Vera Lutz.



The upsurge in industrial production from mid-1958 to the spring of 1960 was greater and lasted longer than that of 1955. On the other hand, unemployment has not fallen to the exceptionally low levels seen in 1955/56, while retail prices have been virtually stable for more than two years.

SECURITIES

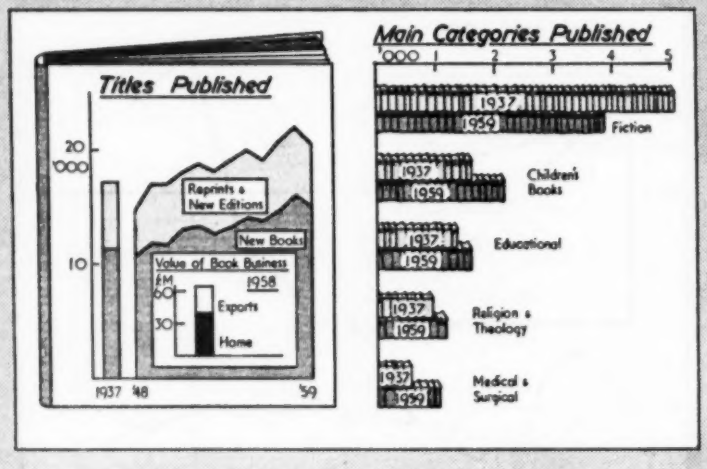


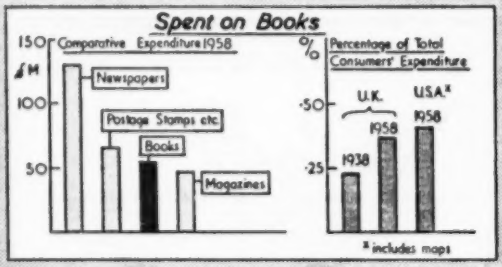


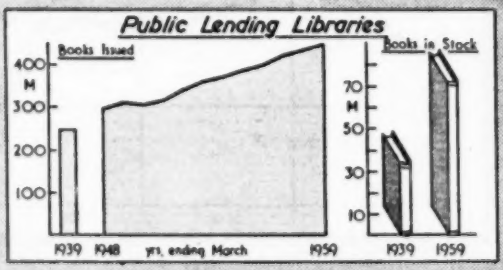
SOURCES: Financial Times
Investors Chronicle

As measured by the Financial Times index, share prices in early September had almost regained the peak level touched at the beginning of the year, and according to some other indices had actually surpassed it. In August the yield on the shares covered by the F.T. index, at 4.27 per cent., was 1.3 per cent. below that on Consols.

BOOKS





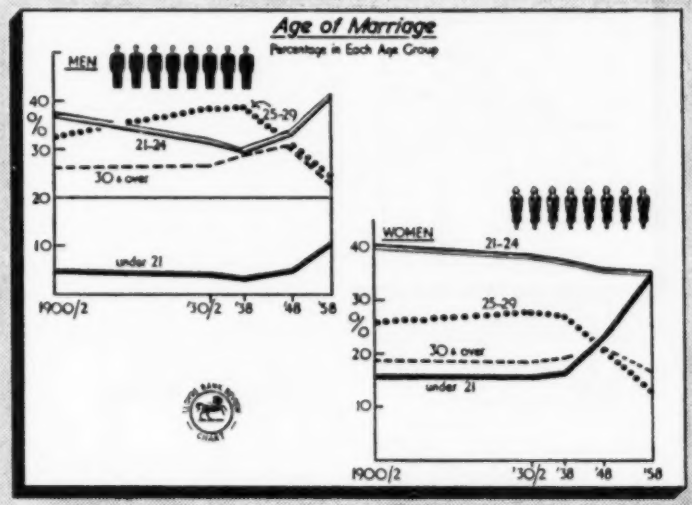


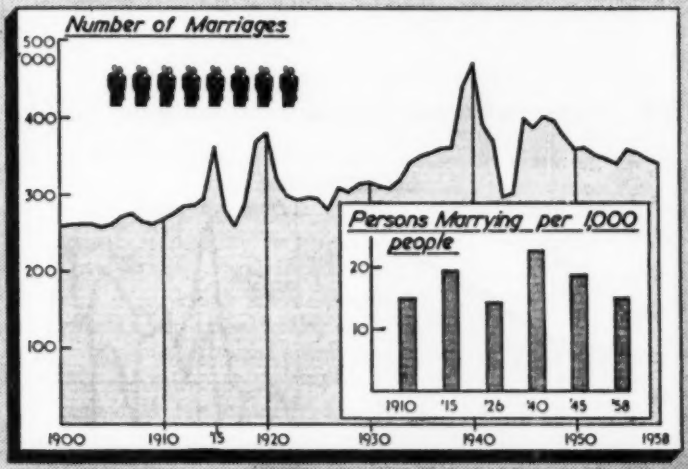
SOURCES: The Bookseller
Library Association
National Income Blue Book

Fewer books were published in 1959 than in 1958 due to last summer's printing dispute. More children's and educational titles appeared than pre-war, but fiction was down by a quarter. For some years the public have spent rather less in bookshops than they have in Post Offices.

MARRIAGE

ENGLAND & WALES

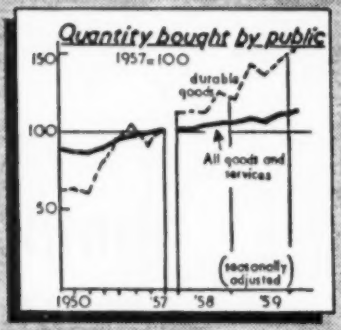


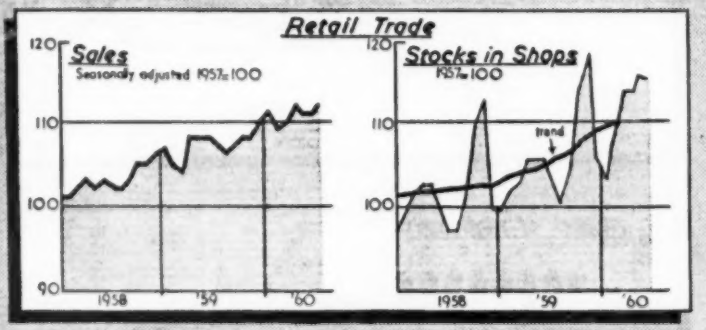


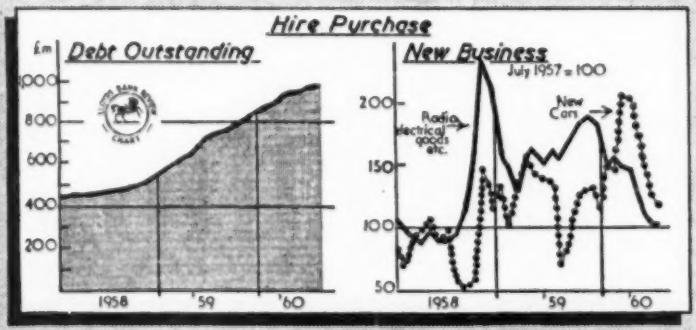
SOURCE: Registrar General's Reports

Nearly three-quarters of the women now marrying are under 25 years old, and over a third are in fact under 21 years. Men also are tending to marry earlier, although not quite to the same extent as women.

CONSUMPTION







SOURCES: Board of Trade Journal; Monthly Digest of Statistics

The effect of tighter credit conditions and the re-imposition of hire purchase controls is seen in the recent check to the demand for durable goods. Debt due on hire purchase contracts rose by only £22m. between April and July, against an increase of £76m. in the previous three months.

EARNING OUR KEEP

THE CITY

BRITAIN earns foreign exchange not only by selling goods abroad, but also by providing services – part of our "invisible exports". The contribution of the City of London in this respect, through commissions and premiums earned overseas by insurance companies, bankers, brokers and merchants, has been put at between £125-£150 millions a year – enough, for example, to pay for all our imports of butter in 1959.

This is an impressive measure of the immediate worth of the City to Britain's economy. Perhaps of greater value is the indirect benefit which our exporters and other traders derive from the City's position as a world financial and trading centre.

More than 350,000 people pour into the City every day to work in the offices of the 20,000 firms, companies and other institutions within its boundaries. A great many of them depend on the expert services of

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